Cardio Menu

TRACKMASTER®

TREADMILL

OWNER'S/SERVICE MANUAL

TMX425

CONTACT INFORMATION

The model TMX425 TRACKMASTER® treadmill is designed to be interfaced with a variety of EKG systems. If you have a question, please contact the stress system manufacturer first. If you still have a question, contact TRACKMASTER® Treadmills:

TRACKMASTER® Treadmills
Toll-Free: (800) 965-6455
E-mail: info@trackmastertreadmills.com

WARNING

Before permitting anyone to use the treadmill, do the following:

- Warn each user about the risk of falling while the belt is in motion.
- Stress the need for caution.
- Demonstrate the proper mounting and dismounting methods.
- Show each user how to use the treadmill as described in this manual.
- Ask each user to do a supervised “test walk” at minimum belt speed to review and practice walking techniques.

© Copyright 2000. Printed in USA. TRACKMASTER® is a registered trademark of JAS Manufacturing Co., Inc. TRACKMASTER is protected by the following US Patents: 5320589, 5431613. All other patents pending. Polar® is the registered trademark of Polar CIC Inc.

Contents

Chapter 1 Introduction 1-1

Notices 1-1
Drawings 1-2
Directional Orientation 1-2
Customer Service 1-2

Chapter 2 Specifications 2-1

Treadmill 2-1
Drive System 2-1
Speed Range 2-1
Incline Range 2-2
Running Surface 2-2
Floor Surface Requirements 2-2

Chapter 3 Safety Information 3-1

Chapter 4 Grounding Instructions 4-1

Chapter 5 Assembly, Location, and Power Requirements 5-1

Chapter 6 Test Plug Procedure 6-1

Chapter 7 Preventive Maintenance 7-1

Daily Maintenance 7-2
Weekly Maintenance 7-2
Semiannual Maintenance 7-2
Deck and Belt Maintenance 7-2
Running Belt Adjustment 7-3
Belt Tension Adjustment 7-4
Exterior Care 7-4
Elevation Screw Lubrication 7-4
Running Board Removal and Maintenance 7-5

Rewaxing the Running Board 7-6
Internal Circuit Breaker Location and Resetting 7-6

Chapter 8 Troubleshooting 8-1

Running Belt Replacement 8-1
Roller Removal 8-2
Drive Motor Removal 8-4
Inverter Drive 8-5
Power On Indicator Not Illuminated 8-5
Main Circuit Breaker Trips When Powering Up 8-6
Treadmill Will Not Start 8-6
Running Belt Slips When In Use 8-6
Running Belt Is Off-Center 8-6

Appendix A Maintenance Log A-1

Appendix B Drawings B-1

Appendix C TMX425C Manual Controller Operating Instructions. C-1

Appendix D TMX425CP Programmable Controller Operating Instructions D-1

1

Introduction

Congratulations on the purchase of your new TRACKMASTER® treadmill. These fine machines have been in production since 1977 and represent state-of-the-art design for heavy-duty institutional treadmills. Thousands of facilities have enjoyed years of daily use provided by dependable TRACKMASTER® treadmills.

TRACKMASTER® treadmills are designed and built to withstand the extraordinary demands of fitness clubs, corporate health centers, hospital wellness programs, physical therapy facilities, and cardiac rehabilitation facilities. Model TMX425 is modified for cardiac stress and pulmonary function testing.

This manual covers the installation, operation, and service of your new TRACKMASTER® treadmill. If you have questions, first consult this manual. If your questions are still unanswered, please call your distributor.

Notices

Three different levels of notices throughout this manual alert you to important information: Note, Caution, and Warning.

Note

Note statements provide additional information, such as the following:

Note For maximum safety and efficiency, the treadmill must have its own dedicated power outlet.

Caution

Caution notices inform you of potential hazards that could result in equipment damage or injury, such as the following:

CAUTION Do not use silicone sprays to wax your treadmill deck. Using silicone sprays may void the warranty. Such sprays can bring about surface changes that cause you to slip.

Warning

Warning notices alert readers to hazards that *will* result in serious injury or death, such as the following:

WARNING Never open the hood of the treadmill while it is plugged into a power outlet. Line voltage will cause severe injury or death.

Drawings

Appendix B displays assembly drawings.

Directional Orientation

References to left, right, front, and rear are based on the assumption that you are standing on the treadmill, facing forward.

Customer Service

If you need service and/or replacement parts for your TRACKMASTER® treadmill, please contact your distributor.

Please include the treadmill serial number in all correspondence.

Note Your TRACKMASTER® treadmill was carefully tested and left the factory in optimum working condition. If any damage occurs during shipping, note the damage on the shipping documents, contact the shipper immediately, and file the appropriate claims. Please have the model and serial numbers ready when you contact your distributor.

2

Specifications

The specifications discussed in this chapter apply to the TRACKMASTER® TMX425 treadmill.

Treadmill

- 400-lb capacity
- Steel chassis with epoxy powder-coat finish

Drive System

- Heavy-duty 2-hp AC inverter duty motor
- 200-240VAC, 1-phase, 50-60 Hz, 15-amp (13 amp-Europe) power supply
- 115VAC, 1-phase, 50-60 Hz, 20-amp power supply (optional)

Note To function properly, each treadmill must have an electrical line dedicated to its exclusive use. A non-dedicated line could cause your treadmill to malfunction. In addition, there must be sufficient amperage to handle all equipment supplied by the overall electrical circuit. Check with your local electrician if you have any questions regarding power requirements.

Speed Range

- 0.5 to 10 mph (standard 115V)
- 0.5 to 12 mph (standard 220V)
- 0.8 to 19 kph (optional)

Incline Range

- 0 to 25%

Running Surface

- 22 in. × 63 in.
- cushioned
- lubricated
- low-profile (8 in. from floor)

Floor Surface Requirements

- 30 in. × 88 in. level surface

3

Safety Information

TRACKMASTER® treadmills meet or exceed all applicable product safety requirements for motor-operated exercise machines. TRACKMASTER® is listed by Engineering Testing Laboratories (ETL); however, all motorized equipment is potentially dangerous if used incorrectly. Before using the TRACKMASTER® treadmill, follow all precautions listed in this chapter, and read the entire Owner's Manual thoroughly. Use the TRACKMASTER® treadmill only as described.

WARNING Serious injury could result from loss of balance or falls. To reduce the possibility of serious injury, carefully observe the following precautions.

- Read this Owner's/Service Manual before operating the treadmill.
- Check the treadmill before use.
- Wear appropriate clothing and running shoes.
- Place the treadmill on a level, unobstructed surface.
- Connect the treadmill to a dedicated, properly grounded outlet that supplies the correct voltage and amperage.
- Never stand on the belt when starting the treadmill.
- Do not step onto or off the belt when it is moving.
- Always slow the treadmill to its minimum speed before stopping.
- Never allow children or pets near the machine without careful supervision.
- Keep hands, feet, and clothing away from any moving parts.
- Never drop or insert objects into any opening.
- Avoid draping towels over the safety side rails or dropping objects on the belt while the treadmill is running.

WARNING Serious injury or death could result from electric shock. To reduce the possibility of electric shock, carefully observe the following precautions.

- Connect the treadmill only to a dedicated, properly grounded outlet. See “Grounding Instructions” on the next page.
- Always unplug the treadmill from the electrical outlet before cleaning it.
- To disconnect the treadmill, set the power switch to the OFF position, and remove the plug from the outlet. When the power is off, the green light next to the power switch is dark.
- Never operate the unit with a damaged power cord or plug.
- Never operate the unit when it is wet.
- Never operate the unit if it is not operating properly.
- Never use extension cords.
- Keep the power cord out of traffic areas and away from heated surfaces.
- Always unplug the machine before service and maintenance are performed.
- Never use the treadmill outdoors.

WARNING Serious injury or death could result from electric shock occurring during defibrillation. Never allow patient or operators near treadmill during defibrillation.

WARNING Before beginning any exercise program, check with your physician to determine your present physical condition and capabilities regarding aerobic exercise. Know your limits and requirements for warm-up, target, and maximum heart and breathing rates; duration of exercise; cool-down periods; and recovery heart rates. Stop exercising immediately if you feel faint or dizzy, or if you experience symptoms of overexertion.

WARNING Serious injury or death could result from operating treadmill in the presence of explosive or flammable vapors and antiseptics.

4

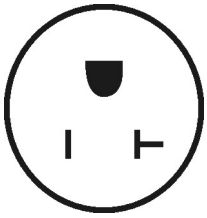
Grounding Instructions

WARNING

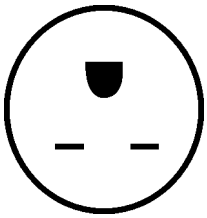
TRACKMASTER® treadmills **must** be grounded to reduce the risk of electric shock. If a malfunction occurs, grounding provides a path of least resistance for an electric current. Ungrounded connections may cause electrical shock.

This product is equipped with a three-wire grounding-type plug. The plug will fit into only a grounding-type outlet. This is a safety feature—do not disable the plug's third (grounding) pin with an adapter! Contact a qualified electrician if you are either (1) unable to insert the plug into your outlet, or (2) uncertain that the outlet is grounded and meets local codes.

The treadmill is designed to operate on a 200-240VAC/15-amp (13 amp-Europe) service (unless you ordered the 115VAC/20-amp power supply option). Make sure that the treadmill is connected to an outlet that looks like the following illustration. Never use an adapter or extension cord with this product. If you have any questions or experience any problems, contact your distributor.



115 VAC
NEMA 5-20R



200-240 VAC
NEMA 6-15R

Notes

5

Assembly, Location, and Power Requirements

TRACKMASTER® treadmills are shipped fully assembled unless otherwise specified. After you have unpacked the treadmill, move it to the exercise area by rolling it on its front wheels. If your treadmill is shipped partially disassembled, refer to Appendix B for assembly.

CAUTION If you are moving the treadmill over a rough surface, such as pavement, use a dolly under the front of the treadmill to prevent damage to the wheels.

Place the treadmill on a level, stable surface—short-pile industrial carpeting is acceptable.

CAUTION Do not place the treadmill on thick or long-pile carpeting. Such carpeting could cause instability or static build-up, and carpet fibers could get caught in the belt and damage the unit.

Provide adequate clearance around the treadmill, away from obtrusive objects such as weight machines. Obstructions can cause injury to the user or damage to the treadmill.

Keep the treadmill away from sources of moisture, such as spas or fountains. Moisture can cause the electronic circuitry to malfunction.

Your TRACKMASTER® treadmill operates on a 200-240VAC, 15-amp (13 amp-Europe) service (115VAC, 20-amp optional). The treadmill requires an approved outlet (see Chapter 4, “Grounding Instructions”) that is properly grounded, includes a 15-amp (13 amp-Europe) circuit breaker (20 amp for the optional 115VAC power supply, with neutral line dedicated on 115VAC), and dedicated to the exclusive use of the treadmill.

WARNING No other equipment may be used on the treadmill circuit. Do not use extension cords.

Using an ungrounded, shared, or otherwise improper circuit will void the machine's warranty and may result in major damage to your treadmill's electronic circuits. Using a shared circuit can also cause the treadmill to unexpectedly shut off, resulting in injury to the user.

Ensure that power cords do not cross traffic areas. Exposed power cords can cause a fall, resulting in injury.

Before plugging the power cord into its power outlet, ensure that the treadmill master power switch is in the OFF position . A power surge through the treadmill electronics could trip the treadmill’s circuit breakers.

6

Test Plug Procedure

Each TRACKMASTER® TMX425 series treadmill includes an RS-232 plug that enables you to test the operation of the treadmill without the ECG unit attached. The plug is contained in the owner's information packet. The plug is to be used **only** for testing the treadmill. Do not stand on or use the treadmill while testing.

To use the test plug, observe the following procedure:

1. Turn the treadmill's main power switch to the OFF position.
2. Disconnect the ECG controller cable from the 9-pin connector located directly above the power cord. Plug the test plug in its place.
3. Hold down the button on the underside of the test plug, and turn the main power switch to the ON position.
4. After the power is ON, release the button on the test plug. Depress and release the button again to elevate the treadmill to a grade of 5%(you may need to rapidly depress the button several times).

Note The button on the test plug must be depressed again within 2 seconds from the time you turn on the treadmill.

5. After you have performed Step 4, each additional push of the test plug button will elevate the treadmill an additional 5%.

CAUTION Before performing the next step, ensure that the belt is clear.

6. Depressing the test plug button a total of four times will raise the treadmill to 20% elevation. Depressing the test button again will start the belt.
7. When the belt is running, each additional push of the test plug button will increase the speed of the belt by 1 mph, up to a maximum speed of 10 mph. Pressing the button after the maximum speed is reached will reduce the speed and elevation.

8. After the elevation returns to 0%, turn the main power switch to the OFF position, and remove the test plug.
9. Reconnect the ECG/Controller interface cable.

Successful completion of the preceding testing procedure ensures that the treadmill is fully functional and responsive to command signals through the RS232 port.

7

Preventive Maintenance

Regular cleaning and maintenance is essential to the life of your treadmill and will keep it operating at its best for many years.

We recommend that you record all maintenance and service in a log (as shown in Appendix A). Please refer to Appendix B drawings to guide your service efforts. The following procedures will help to ensure many years of safe and trouble-free operation.

WARNING

Before cleaning the TRACKMASTER® treadmill, turn the main power switch to OFF, and disconnect the treadmill from its power outlet. Never use wet cleaning materials near a power source; you could suffer an electric shock.

CAUTION

To preserve the conditions of your warranty, make sure that all repair procedures (other than normal maintenance) are performed by a qualified service provider. Contact your distributor.

Use only TRACKMASTER® replacement parts. Using other parts may void your warranty and may cause your treadmill to malfunction.

Daily Maintenance

Note Before daily operation, ensure that the treadmill is functioning properly.

- Wipe the treadmill to remove soil, moisture, and perspiration.
- Clean the hood and handrails with a soft cloth, dampened with a solution of warm water and mild detergent.
- Remove stubborn stains and scuff marks with a nonabrasive, industrial strength cleaner, such as Formula 409®. Spray all cleaners onto a terrycloth-type rag; avoid spraying cleaners directly onto the treadmill.

Weekly Maintenance

- Vacuum around and under the treadmill. Clean all exposed surfaces with the vacuum cleaner. Do not move the treadmill from its original position—moving it will compromise the original belt tracking setting.
- Check running belt tension.

Semiannual Maintenance

- Lubricate the elevation screw with molybdenum-based grease that is available from your local parts store.
- Evaluate the condition of the deck and belt.

Deck and Belt Maintenance

CAUTION Use only TRACKMASTER® replacement parts. Using other parts may void your warranty and cause your treadmill to malfunction.

We recommend that you evaluate the deck and belt every 8,000 miles.

Note The 8,000-mile check is a maximum recommendation. Your treadmill may require maintenance much earlier, depending on use and cleanliness of equipment.

You may need to flip or replace the deck, depending on its condition (see “Running Belt Replacement” on page 8-1). If the deck is rough or grooved, it may be necessary to rewax it or flip it (see “Flipping the Running Board” and “Rewaxing the Running Board” on page 7-6). If the deck is grooved, flip it. If the deck is rough, rewax it.

Running Belt Adjustment

This procedure requires the following tool:

- 1/4-in. Allen wrench

CAUTION Because this adjustment is not covered under your warranty, it is important that you review these instructions thoroughly before proceeding.

The TRACKMASTER® patented MasterTrack® Belt Tracking System significantly reduces the need to adjust the belt on your TRACKMASTER® treadmill. However, when you operate your treadmill for the first time, you may need to adjust the tracking of the belt to conform to your floor. You may also need to adjust the tracking if you move the machine to another location. (See Appendix B.)

Your running belt should remain centered, although a slight amount of movement to the left or right is normal during use. Do not allow the running belt to travel all the way to either side.

To adjust the belt tracking, do the following:

1. Turn the treadmill’s power switch to ON.

CAUTION Do not stand on the running belt when starting the treadmill. You could fall, causing serious injury.

---

2. Increase the speed to 3 mph.
3. Observe the left side of the running belt as it travels over the rear roller. If the belt runs to the right side of the roller, turn the right bolt one-quarter turn clockwise, and turn the left bolt one-eighth turn counterclockwise.

Note When tightening one side of the belt, always loosen the opposite side one-half as much. This procedure provides finer control, with a smaller impact on belt tension.

Check the belt after 2 minutes, with the treadmill running at approximately 7 mph. If the belt does not correct itself, continue with slight turns until the belt is in the center of the rear roller. If the belt runs toward the left, use the left adjustment.

Note Uneven floors accelerate belt misalignment. This situation may require either (1) larger and more frequent adjustments to prevent belt damage, or (2) the installation of a rubber treadmill pad, which is available at your local fitness store or by phone from TRACKMASTER® at (800) 965-6455.

Belt Tension Adjustment

The running belt may stretch and loosen with regular use. This looseness is noticeable when the belt tends to hesitate or stick. If the belt is loose and slipping, tighten both adjustment bolts equally (clockwise) in small increments until the slipping stops.
(See Appendix B.)

Exterior Care

The epoxy powder-coat finish on your TRACKMASTER® treadmill is as durable as automobile finishes and requires minimal care. Do not allow perspiration to build up on your treadmill. Wipe the unit daily.

Elevation Screw Lubrication

This procedure requires the following tools:

- Molybdenum-based grease (Mobil #530304 or equivalent)
- Clean, lint-free cloth
- Small paint brush

Clean and lubricate the treadmill elevation screw once every year. In high-use environments, clean and lubricate it once every 6 months.

1. Raise the treadmill to its maximum elevation.
2. Turn the main power switch to the OFF position, and unplug the treadmill from its outlet.
3. Using a lint-free cloth, remove the old lubricant and accumulated dust from the elevation screw.

4. Use a small brush to reapply a thin coat of grease to the threads of the elevation screw. Do not use too much grease—the excess could squeeze onto the floor and create a slip-and-fall hazard.
5. Return the unit to service.

Running Board Removal and Maintenance

This procedure requires the following tools:

- 1/4-in. Allen wrench
- 3/16-in. Allen wrench

Running Board Removal

1. Remove the two running belt-tensioning bolts, and set bolts and end caps aside.
2. Push take-up roller against the running deck to provide as much belt slack as possible.
3. Lift the outside edges of the running belt. On each side of the running belt are three Allen-head screws that secure the running board to the three crossbars.
4. Remove all six Allen-head screws (three per side), and pull the running board out of the treadmill.
5. Push the deck to the right, and lift the left edge (v-guide) of the running board to remove it. (See Appendix B.)

Flipping the Running Board

1. Remove the running board from the treadmill, and place it on a bench or table at a comfortable height. (Follow the “Running Board Removal” instructions on page 7-5.)
2. Flip the running board. If this surface has not been used, reinstall the board. If the surface has been used before, rewax it.
3. Reassemble the running board by reversing the preceding three steps.

Rewaxing the Running Board

This procedure requires the following tools:

- 1,000-watt iron (minimum wattage)
- Scotch-Brite® pad

CAUTION Do not use silicone sprays or any substances other than TRACKMASTER® wax, which may be purchased directly from your distributor. Contact your distributor for further information.

1. Turn the master power switch to the OFF position, and unplug the treadmill from its power outlet.
2. Remove the running board from the treadmill, and place it on a bench or table at a comfortable height. (Follow the "Running Board Removal" instructions on page 7-5.)
3. Clean the running board surface with a dry Scotch-Brite® (or similar) pad. Remove as much dirt as possible without damaging the tempered running board surface; then dust the surface with a clean, dry rag.
4. Set the iron temperature to its hottest setting (use an iron rated at 1,000 watts or more). Pour approximately 1/3 cup of the special wax beads down the center of the running board. Hold the iron on the beads until the wax begins to melt.
5. Slowly move the iron up and down the running board in small circular patterns until the running board and wax are hot enough for the board to absorb the wax. The first coat can require up to 45 minutes, because the board needs to reach the appropriate temperature to absorb the wax. After the appropriate temperature has been reached, the wax will boil like hot water and then soak into the running board.
6. Be patient! If you do not work the wax in properly, you may have to rewax again much earlier than necessary. When you finish, remove any excess wax from the board by gently buffing the surface with a Scotch-Brite® pad.

Internal Circuit Breaker Location and Resetting

1. All circuit breakers are located at the front of the treadmill and below the hood. (See Appendix B.)
   - 2 ea. Power Supply / Relay Board (1/4 amp)
   - 2 ea. Elevation Motor (1 amp [220v]; 2 amp [110v])
2. To reset a breaker, push the button.

Note Contact your distributor for information on possible causes of tripped circuit breakers.

8

Troubleshooting

Running Belt Replacement

CAUTION Use only TRACKMASTER® replacement parts. Using other parts may void the warranty, compromise the safety features, and cause a malfunction.

This procedure requires the following tools:

- 1/2-in. combo wrench
- 1/2-in. socket wrench
- 1/4-in. Allen wrench
- 1/4-in. nut driver
- 3/16-in. Allen wrench
- Tape measure
- Marking pencil

1. Elevate the front end of the treadmill approximately 10 in. above the floor. (See Appendix B.)
2. Lift and support the rear end of the treadmill to make the frame level.
3. Turn the master power switch to the OFF position, and unplug the treadmill from its power outlet.
4. Remove the rear end caps by removing the belt tensioning bolts with a 1/4-in. Allen wrench. Remove the three fasteners securing the hood, slide the rubber grommets up the center rails, raise the hood, and secure by sliding one side over the rubber grommet.
5. Push the rear roller forward to loosen the belt.
6. Remove the 5/16-in. bolt securing the front drive roller, and then pull the roller out of the treadmill.

7. Remove the rear roller.
8. Remove the running board. (Follow the “Running Board Removal and Maintenance” instructions on page 7-5.)
9. Remove the 5/16-in. bolts securing each crossbar to the mounts, and remove the crossbars.
10. Install new running belt.
11. To reassemble, reverse the preceding steps.
12. When installing the front drive roller, ensure that the drive belt is properly located over both sprockets.
13. After you have completed the installation, and before you tension the belt, make two visible marks, 50 in. apart, on the belt (if such marks are not already present). Tighten the rear roller take-up bolts evenly until the two marks are exactly 50-3/8 in. apart. This will provide the 1% tension recommended by the belt manufacturer.
14. The running belt is now ready for tracking adjustment (see “Running Belt Adjustment” on page 7-3).

Note Depending on its use, the running belt will stretch slightly. When this happens, you will feel the belt hesitate briefly at each foot strike. Adjust tension immediately if this occurs. Turning both tension bolts one-half turn will usually provide the proper tension. Do not overtighten the tension bolts. If it appears that the belt is near the proper tension, make one-quarter turn adjustments.

Roller Removal

CAUTION Use only TRACKMASTER® replacement parts. Using other parts may void your warranty, compromise the treadmill’s safety features, and cause your treadmill to malfunction. Never stand rollers on end, because their weight could damage the roller bearings.

This procedure requires the following tools:

- 1/2-in. socket wrench
- 1/4-in. Allen wrench
- 1/4-in. nut driver
- 3/16-in. Allen wrench

Front Drive Roller

1. Elevate the treadmill to approximately 12%. Turn the master power switch to the OFF position, and unplug it from its power outlet. Remove the three fasteners securing the hood, slide the rubber grommets up the center rails, raise the hood, and secure by sliding one side over the rubber grommet.
2. Turn both 5/16-in. rear roller take-up bolts counterclockwise until there is no tension on the running belt.
3. Remove the 5/16-in. bolt that secures the front drive roller. Push the roller to the left side of the treadmill, and then pull it out of the treadmill.
4. To install the roller, reverse the preceding steps. Ensure that the drive belt is correctly placed on both sprockets.
5. Adjust the running belt tension and tracking.

Rear Roller (Driver Roller)

1. To remove the driver roller, follow the steps for removing the front drive roller.
2. Remove the end caps.
3. Remove the two 5/16-in rear roller take-up bolts that are used to adjust the running belt.
4. Remove the rear roller by pulling it straight back past the side rails and then out of the belt.
5. To install the new rear roller and reinstall the front drive roller, reverse the preceding steps.

CAUTION Because the rollers are heavy, permitting the roller shaft to hit the ground vertically can damage the roller bearings. Always handle rollers horizontally, and never impact the roller shaft.

Drive Motor Removal and Reinstallation

CAUTION Use only TRACKMASTER® replacement parts. Using other parts may void your warranty and cause your treadmill to malfunction.

This procedure requires the following tools:

- 1/8-in. Allen wrench
- 3/16-in. Allen wrench
- Phillips-head screwdriver
- 9/16-in. wrench
- 1/2-in. wrench
- Small flat-tip screwdriver
- 1/4-in. nut driver
- 7/16-in. wrench

1. Turn the master power switch to the OFF position, and unplug the treadmill from its power outlet. Remove the three fasteners securing the hood, slide the rubber grommets up the center rails, raise the hood, and secure by sliding one side over the rubber grommet.
2. Loosen the two motor tensioning adjust nuts from the adjustment bolts, and loosen the two nuts toward the motor.
3. Remove the ground wire at the motor
4. Remove the four nuts that secure the motor plate to the motor pan.
5. Remove the timing belt from the motor pulley.
6. Remove the drive motor assembly from the unit.
7. Remove the flywheel, timing sprocket, pulley key, and speed pick-up collar from the old motor, and then set them aside.
8. Remove the four retaining bolts and nuts securing the motor to the motor mount plate.
9. Install the original parts onto the new motor, and reinstall them in reverse order.
10. Adjust speed pickup sensor to magnet gap at .06 in.

Inverter Drive

You should not change the Inverter Drive programs unless directed to do so by the factory. To check the programming of the drive, press the Mode button, and use the UP arrow until the number “225” appears. Press the Mode button, and you are now ready to look at the drive programs. Consult your distributor before making changes. (For wire routing, see Appendix B.)

WARNING

The instructions in this section are based on the assumption that the repairs will be performed by a properly trained and authorized repair technician. All motorized equipment is potentially dangerous if used incorrectly. Read the precautions and this owner's manual before attempting any repairs. If the scope of the repairs exceeds the technician’s knowledge or experience, call your distributor for the name of the nearest qualified service repair facility.

Power On Indicator Not Illuminated

1. This procedure requires the use of a meter that is capable of reading at least 250 VAC and measuring ohms.
2. Turn treadmill main power switch to OFF. Unplug the treadmill power cable from the wall receptacle.
3. Measure the voltage at the wall outlet for correct voltage level. If voltage is not correct, reset circuit breaker. If voltage is correct, proceed to next step.
4. Plug the treadmill power cable into the wall receptacle. Turn treadmill main power switch ON.
5. Measure voltage at one of three locations: Inverter between L1 and L2; at power supply PCB JP2 pin 1 to 3; or power supply PCB JP2 pin 2 to 4. If voltage is not present, proceed to the next step. If voltage is present, check connections at power indicator.
6. Measure voltages at C/E filter output. If voltage is not present, check connections at C/E filter input. If connections at C/E filter input are good, measure voltage at C/E filter output. If voltage is not present, check connections at main voltage circuit indicator.
7. If connections at the main circuit breaker are good, turn main power switch to OFF, and unplug the treadmill from the wall receptacle. Check the continuity of each conductor of the power cord. If the power cord is good, check the function of the main power switch in the ON and OFF positions.

Main Circuit Breaker Trips When Powering Up

If the main circuit breaker trips when the treadmill is first turned on, the main circuit that the treadmill is on may be overloaded. This will happen even if the treadmill is on a proper, dedicated line. Refer this problem to your local electrician and check that the service panel circuit breaker is a high magnetic breaker.

Treadmill Will Not Start

1. Make sure emergency stop button is not engaged.
2. Make sure the treadmill's main power light is on (green).
3. Make sure the ECG cable from the stress system to the treadmill is in place and secure.
4. Use the RS232 test plug to check the functionality of the treadmill (see Chapter 6). If the treadmill tests OK, then the problem is probably in the ECG cable on the ECG computer.

Running Belt Slips When In Use

Over a period of time, the treadmill running belt will stretch and allow slippage when used by a heavy person. See "Belt Tension Adjustment" on page 7-4 to adjust.

Running Belt Is Off-Center

Occasionally the treadmill running belt will become off-center. See "Running Belt Adjustment" on page 7-3 to adjust.

Appendix

A

Maintenance Log

Serial #_____Date Purchased_____

Purchased From_____Phone_____

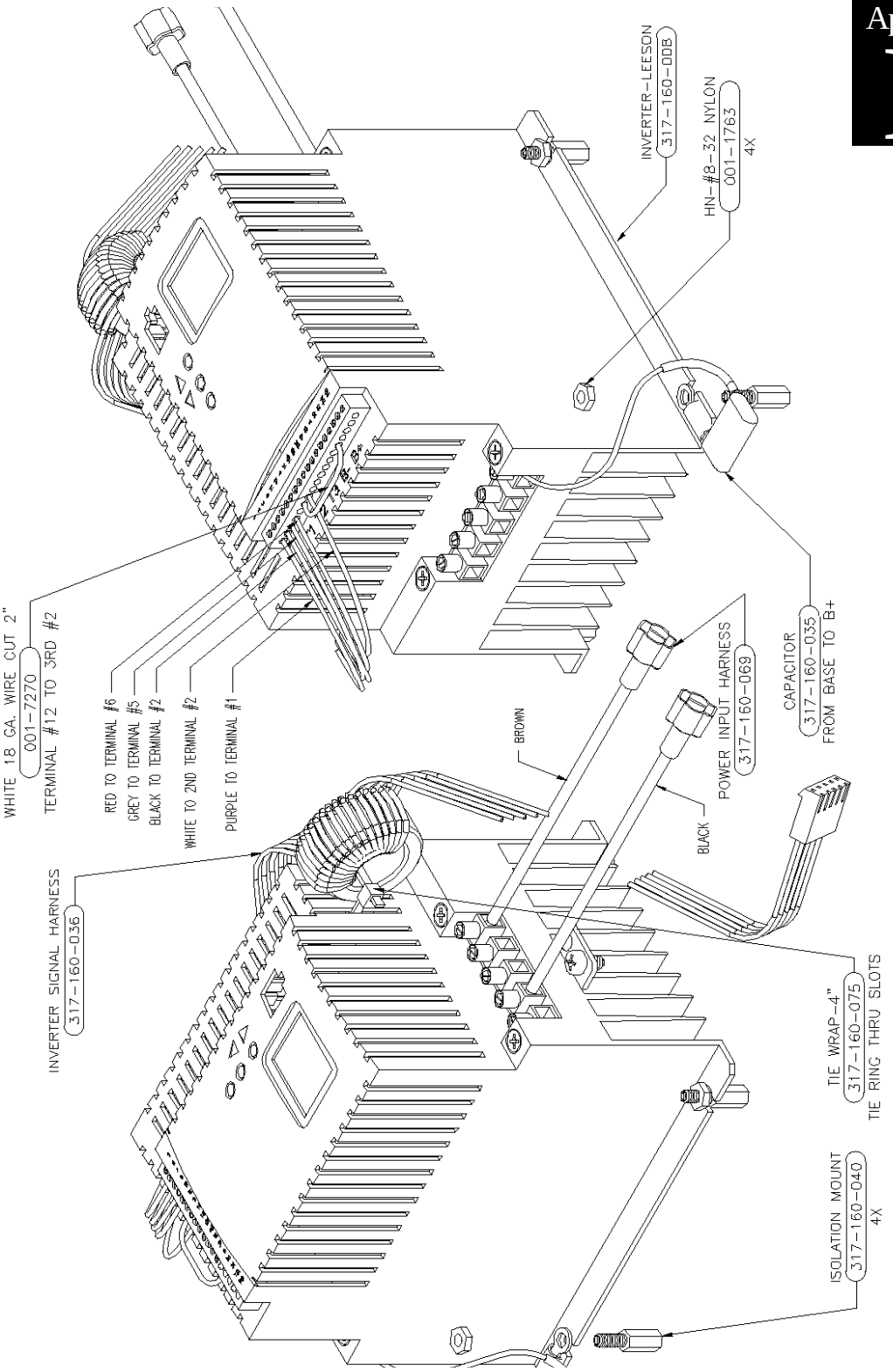
DATE	HOURS	SERVICE COMPLETED	COST

Notes

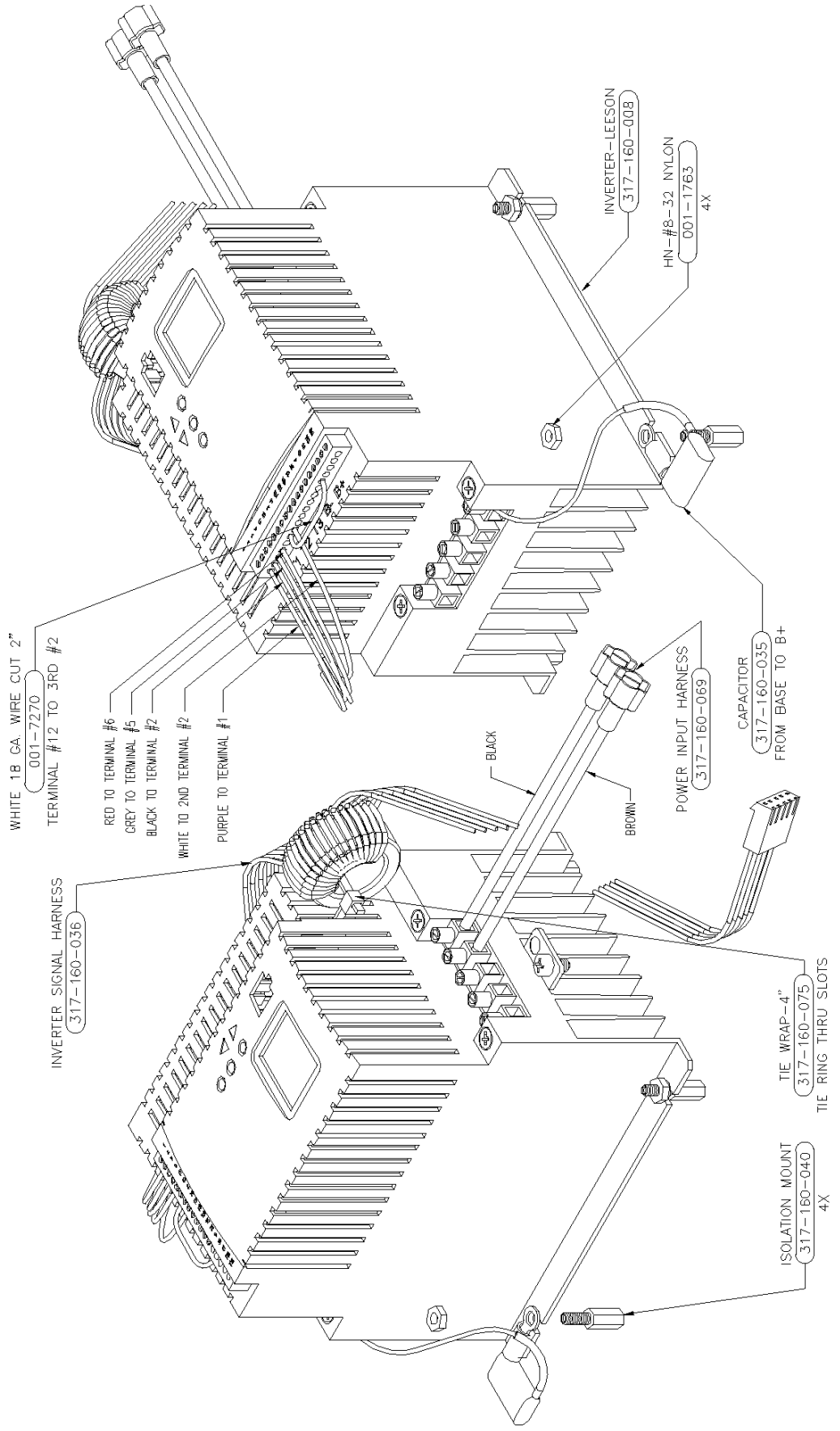
Drawings

Appendix

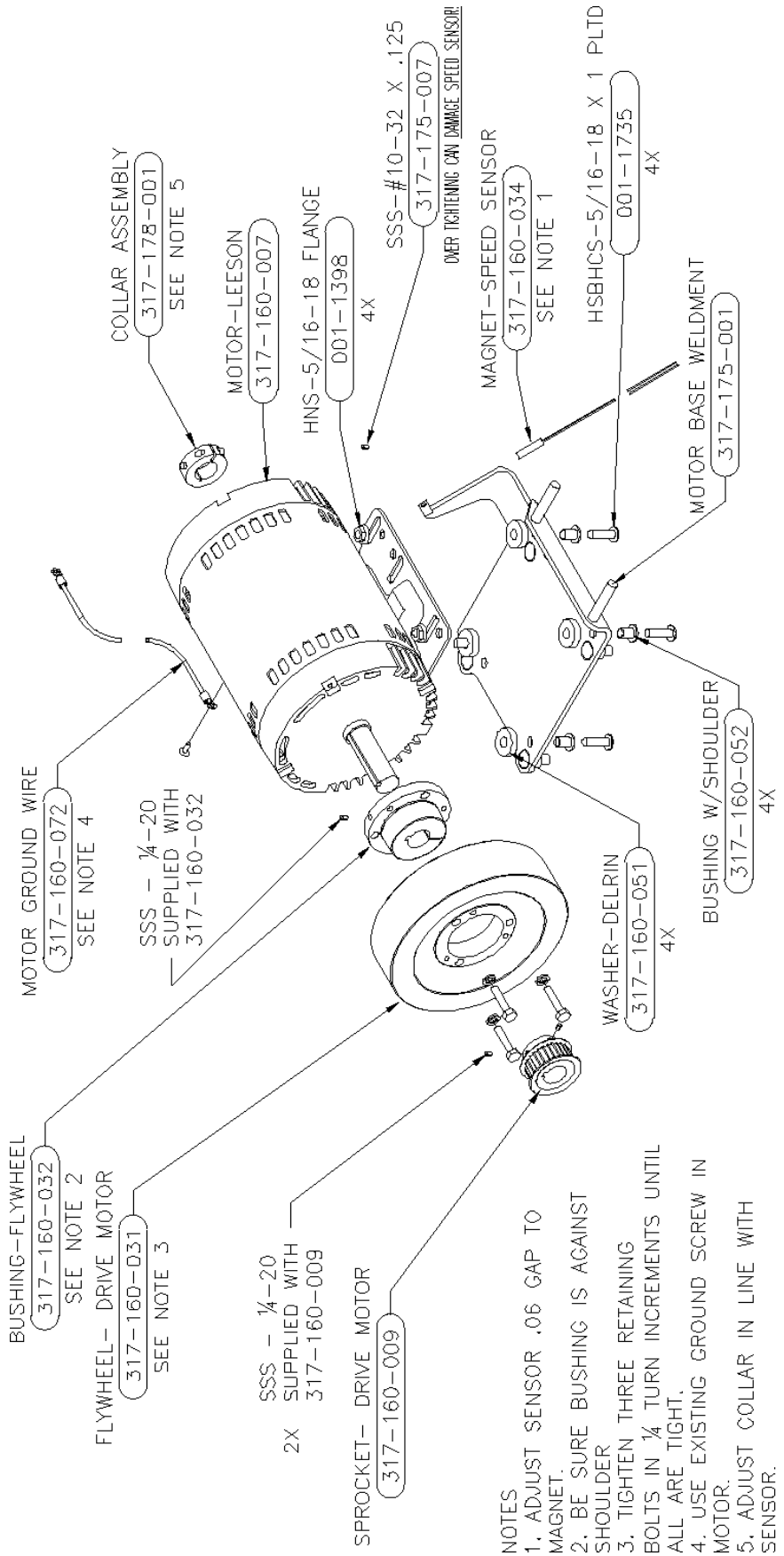
B



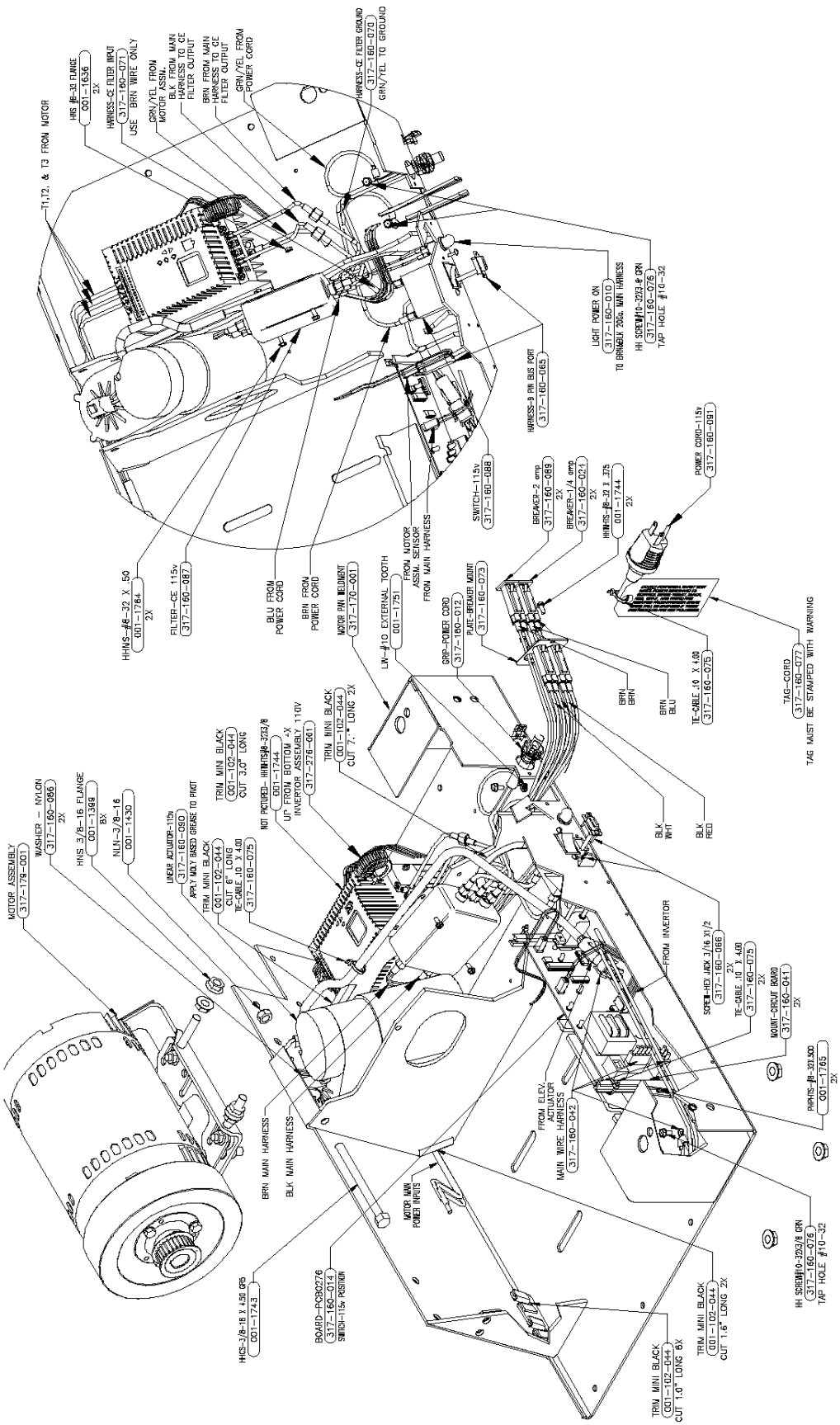
Invertor Assembly 115V



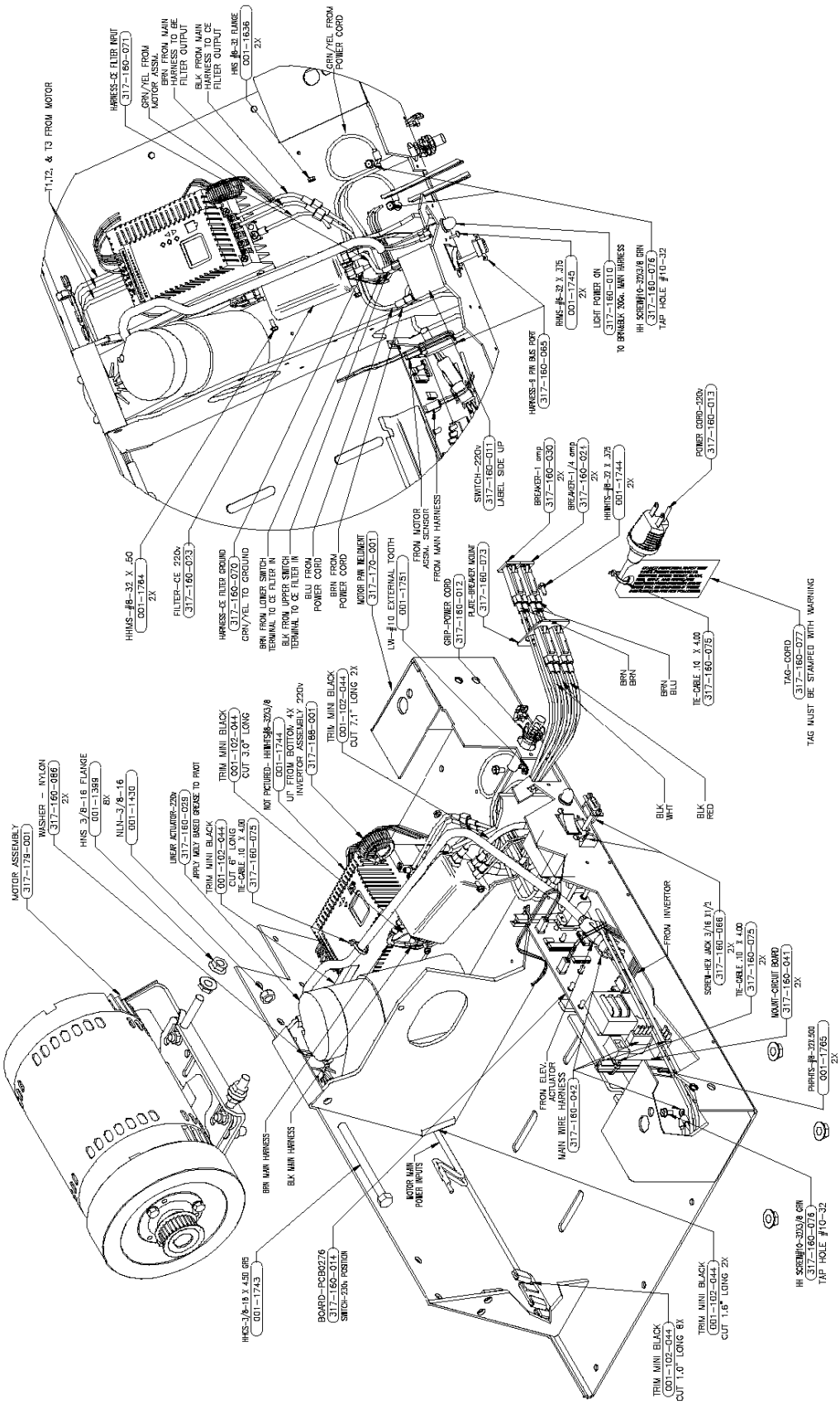
Invertor Assembly 220V



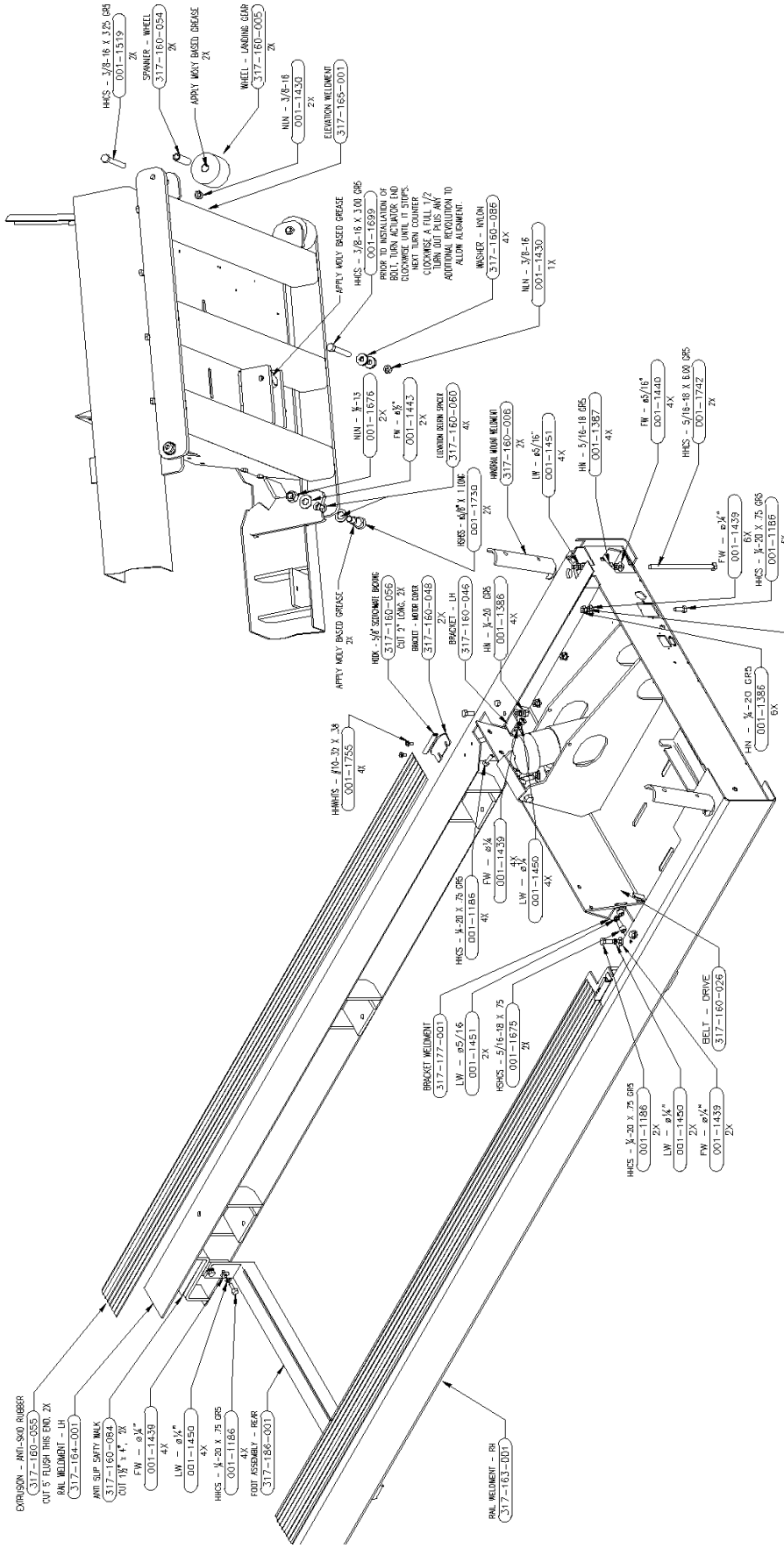
Motor Mount Assembly



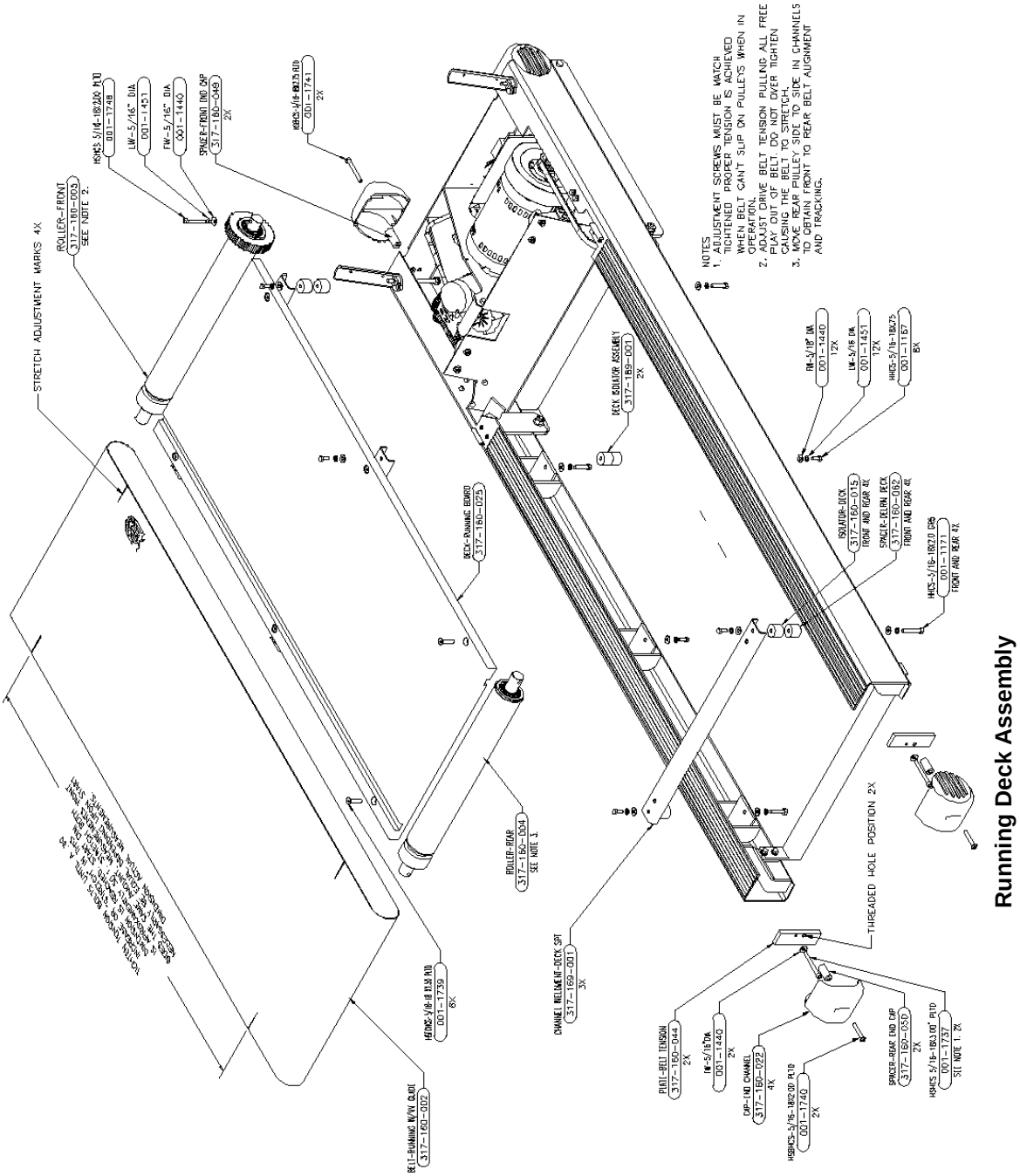
Motor Pan Assembly 115V



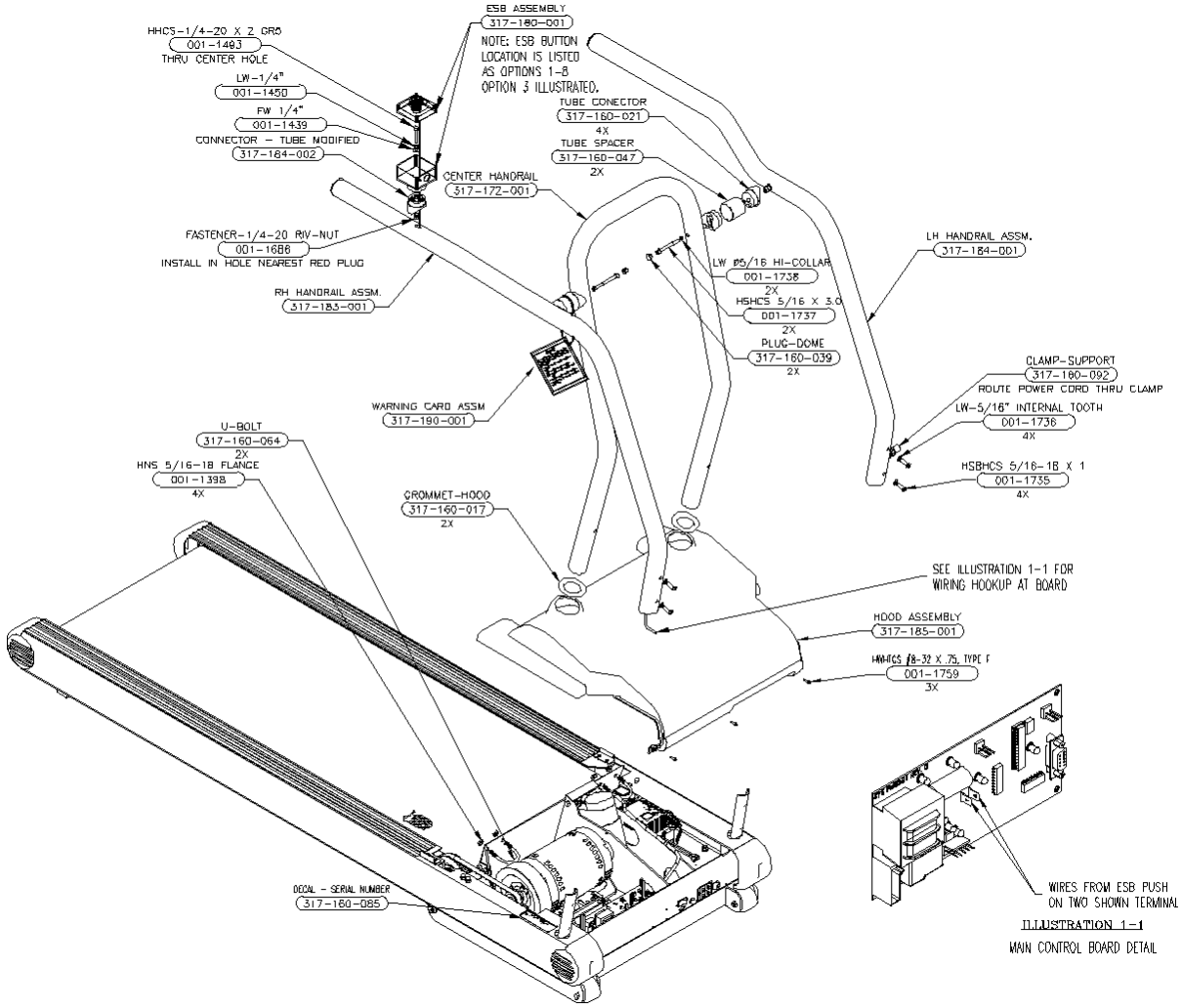
Motor Pan Assembly 220V



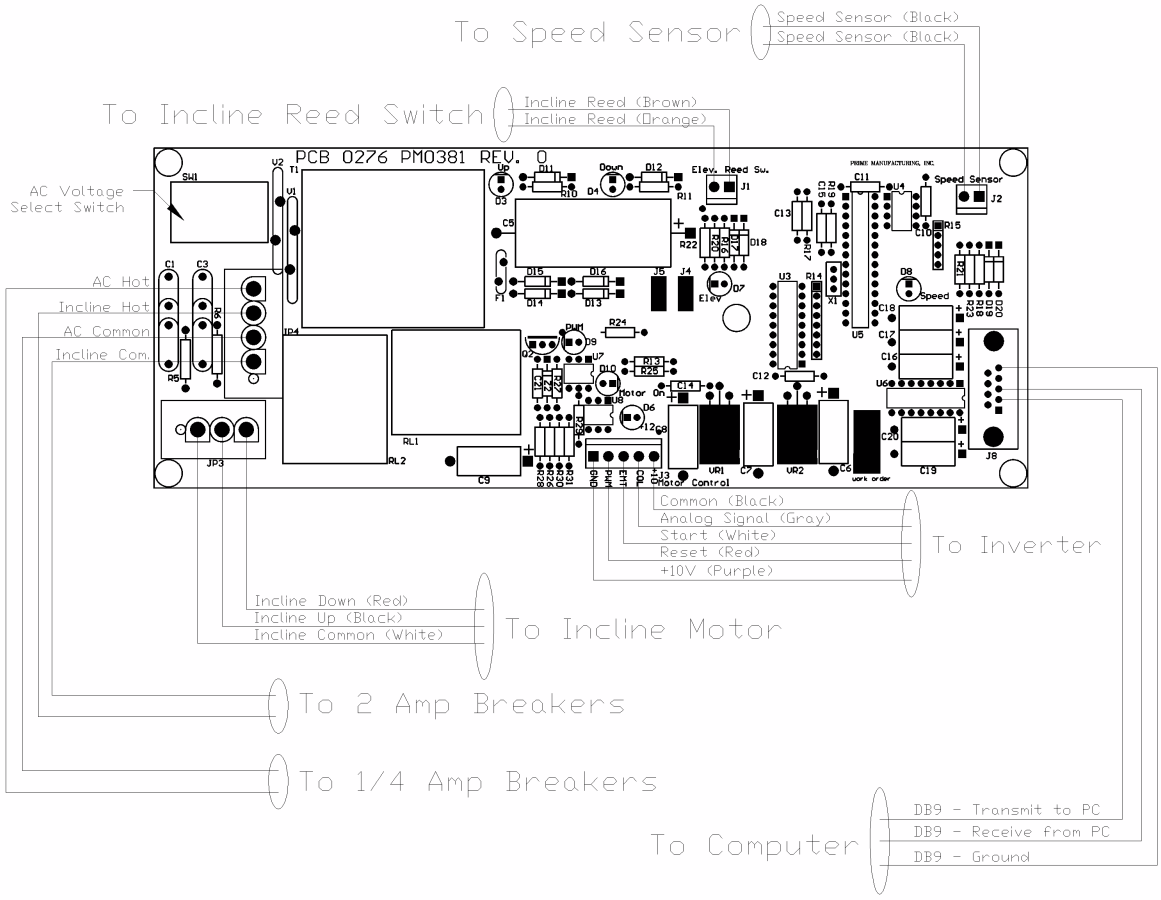
Frame Assembly



Running Deck Assembly



Final Assembly



Circuit Board

Appendix

C

TMX425C Manual Controller Operating Instructions

Master Power Switch

The master power switch is located next to the power cord on the treadmill. The switch should always be in the OFF position when the treadmill is not in use.

CAUTION Never use your foot to turn this switch ON or OFF because you could damage the switch and void the warranty. Never plug the treadmill into its power outlet with the master power switch in the ON position because you could cause a power surge, which could trip the treadmill's circuit breakers.

Start Key

Press the Start key to immediately start the belt at minimum speed.

Cool Down Key

Press the Cool Down key to initiate a 60 second cool down phase. The running belt will gradually slow to the minimum speed and then completely stop. The incline will gradually reset to 0%.

Stop Keys

Press either Stop key to halt the running belt within 1 to 5 seconds and reset elevation to 0%.

Speed + / - Keys

Once the running belt has started, press the "+" arrow to increase the speed. Press the "-" arrow to decrease the speed. The display numbers for the speed will increase or decrease slightly faster than the actual belt speed.

Speed Display Window

The speed display window shows the speed of the running belt in miles per hour (a display calibrated for kilometers per hour is optional).

Status Display Window

You can monitor your performance in up to seven different modes in the status display window. Press the Select key to advance to the next display mode. The status display automatically resets to zero each time the running belt stops.

A red light next to the function indicates which information is displayed in the window. The information available includes

- TIME—displays the amount of time elapsed for the exercise session
- DISTANCE—displays the accumulated distance for the exercise session
- PACE—displays the number of minutes needed to run one mile
- CALORIES—displays the number calories burned during the workout, based on the weight entered into the controller
- CAL/MINUTE—displays the number of calories burned per minute
- METS—Displays the amount of METS per minute.
- HEART—When wearing a Polar® chest strap a blinking red heart below the display window indicates the user's current pulse rate. (The Heart must be selected in order to display pulse rate.)

Select Key

Press the Select key to change the display mode in the status window.

Scan Key

Press the Scan key to choose an alternating cycle of all available display modes. Each mode displays for three seconds in the cycle.

Weight +/- Keys

Use the Weight +/- to enter user weight prior to the exercise session. The default is 150 lb.

Note It is important to enter each user's correct weight before the exercise session because all display calculations are based upon this number.

Incline Display

The belt inclination is displayed in the Incline Display window. The minimum elevation is 0% and the maximum is 25%.

Incline +/– Keys

The Incline +/– keys increase or decrease the incline of the running belt in 0.5% increments. Press and hold the + or – key until the desired inclination is displayed. The front of the TRACKMASTER® treadmill will gradually raise or lower until the desired incline is attained.

Setup Check

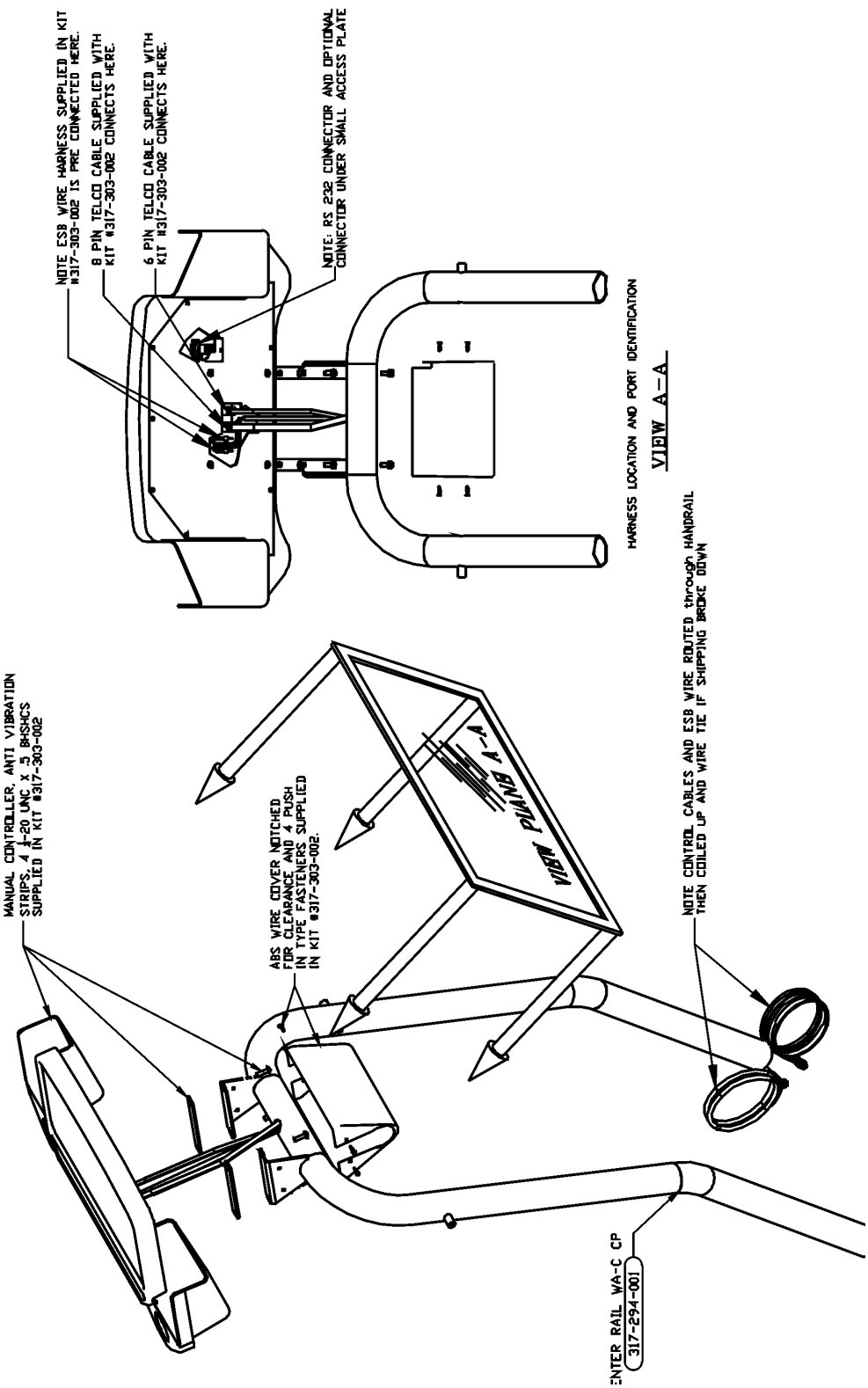
WARNING !!Do not alter unless asked to do so!!

With power ON, press and hold the Speed + and Elevation – keys. After a few seconds "P 1" should appear in the center window. (Sometimes you must release and hold these keys again in order to get into this function.)

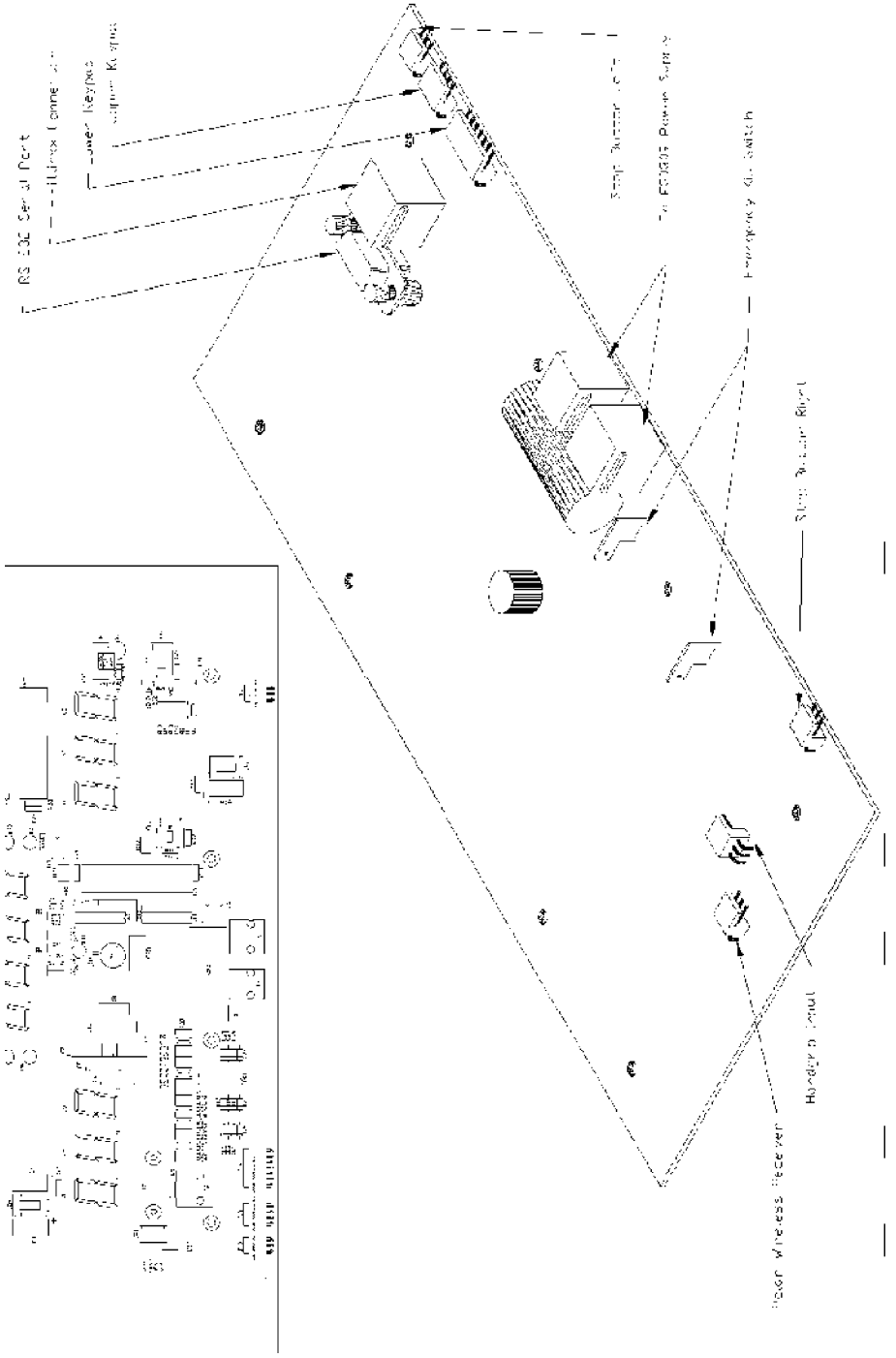
1. "P 1" in Center window – "bri" in Speed window. (bri = MPH, Si = KPH)
   - Use UP or DOWN Incline key to toggle between.
   - Press the Select key and "P 2" will appear in the center window.
2. "P 2" in Center window – "0.5" in the Speed window. (Minimum speed)
   - Use UP or DOWN Speed key to adjust setting.
   - Press the Select key and "P 3" will appear in the center window.
3. "P 3" in Center window – "12.0" in the Speed window. (Maximum speed)
   - Use UP or DOWN Speed key to adjust setting.
   - Press the Select key and "P 4" will appear in the center window.
4. "P 4" in Center window – "25.0" in the Incline window. (Incline Cal.)
   - Use the UP or DOWN Elevation key to adjust setting.
   - Press the Select key and "P 5" will appear in the center window.
5. "P 5" in the Center window – "25.0" in the Incline window. (Incline Max.)
   - Use the UP or DOWN Elevation key to adjust setting.
   - Press the Select key and "P 6" will appear in the center window.
6. "P 6" in the Center window – "4" in the Speed window. (Do not Adjust)
   - Use the UP or DOWN Speed key to return to "4"
   - Press the Select key and "P 7" will appear in the center window.
7. "P 7" in the Incline window – "3175" in the Center window.(Do not Adjust)
   - Use the UP or DOWN Speed key to return to "3175"
   - Press the Select key and "P 8" will appear in the center window.

8. “P 8” in the Center window, “Hr” in Incline, and “Ser” in the Speed window. (Hr = Heart rate, Ser = Serial input, PU = Pulse input)
   - Use the UP or DOWN Incline key to toggle between.
   - Press the Select key and “HrS” will appear in the Incline window. (HrS = Total hours displayed in center window and minutes in Speed window.)
   - Press the Select key and “dIS” will appear in the Center window. (dIS = Total Distance – Miles in the Incline window, Tenths in the Speed window.)
   - Press the Select key and “CALS” appears in the Center window.
   - Pressing the Speed + and the Incline – keys will change Center display to “CAL” and then pressing the Start key will run unit through speed calibration.
   - Pressing the Select key after “CALS” appears in the Center window will change the Center display to “CALE.” When “CALE” is displayed, pressing the Speed + and the Incline – keys will change the Center window display to “GrAd,” then pressing the Start key will allow Incline, (Grade), setup.
   - Pressing Select after “CALS” appears and again pressing Select after “CALE” appears will take you out of Setup Check and back to normal operation.

WARNING !!Do Not perform the Grade setup unless instructed to do so!!


NOTE ESB WIRE HARNESS SUPPLIED IN KIT #317-303-002 IS PRE CONNECTED HERE.
8 PIN TELCO CABLE SUPPLIED WITH KIT #317-303-002 CONNECTS HERE.
6 PIN TELCO CABLE SUPPLIED WITH KIT #317-303-002 CONNECTS HERE.
NOTE: RS 232 CONNECTOR AND OPTIONAL CONNECTOR UNDER SMALL ACCESS PLATE
HARNESS LOCATION AND PORT IDENTIFICATION
VIEW A-A
MANUAL CONTROLLER, ANTI VIBRATION STRIPS, 4 1-20 UNC X .5 BHSHCS SUPPLIED IN KIT #317-303-002
ABS WIRE COVER NOTCHED FOR CLEARANCE AND 4 PUSH IN TYPE FASTENERS SUPPLIED IN KIT #317-303-002.
VIEW A-A
NOTE CONTROL CABLES AND ESB WIRE ROUTED through HANDRAIL THEN COILED UP AND WIRE TIE IF SHIPPING BROKE DOWN
ENTER RAIL WA-C CP 317-294-001

Manual Control Assembly



Manual Control Wiring

Appendix

D

TMX425CP Programmable Controller Operating Instructions

Master Power Switch

The master power switch is located next to the power cord on the treadmill. The switch should always be in the OFF position when the treadmill is not in use.

CAUTION Never use your foot to turn this switch ON or OFF because you could damage the switch and void the warranty. Never plug the treadmill into its power outlet with the master power switch in the ON position because you could cause a power surge, which could trip the treadmill's circuit breakers.

Start Key

Press the hold the Start key, the center display will countdown from 3 seconds and then the belt will start.

Cool Down Key

Press the Cool Down key to initiate a 60 second cool down phase. The running belt will gradually slow to the minimum speed and then completely stop. The incline will gradually reset to 0%.

Stop Keys

Press either Stop key to halt the running belt within 1 to 5 seconds and reset elevation to 0%.

Speed + / - Keys

Once the running belt has started, press the "+" arrow to increase the speed. Press the "-" arrow to decrease the speed. The display numbers for the speed will increase or decrease slightly faster than the actual belt speed.

Speed Display Window

The speed display window shows the speed of the running belt in miles per hour (a display calibrated for kilometers per hour is optional).

Message Center

You can monitor your performance in up to five different modes in the message display window. This information continuously scrolls and repeats throughout the workout.

- CAL—displays the number of calories burned during the workout, based o the weight entered into the controller
- CAL/Hr—displays the number of calories burned per hour
- HEART—When you are wearing a Polar® chest strap the blinking red heart below the message center indicates the user's current pulse rate
- PACE—displays the number of minutes needed to run one mile
- METS—displays the amount of METs per minute

Program Select Key

The Program Select key changes the display mode and toggles through the workouts named in the Message Center. Choose from the following programs: Forest Walk, Ozark Trail, The Rockies, Interval, Fitness Test, HRC (heart rate control) Aerobic, HRC Fat Burn, 5K Trainer, and then 20 user programs. Select a program you want to use, press the Start key, and follow the instructions in the message center.

In the Dot Matrix Center below the Message Center, information for each workout is also displayed. Additionally, Heart rate will first show here, bar graph-like elevations are displayed for the whole routine and can be manipulated before and during a routine. These will appear Red when not started, Yellow when actually working that section, and then Green when finished. The lap currently running, in Manual mode or the 5K Trainer, appears in the center of the Track with the Yellow Dot representing your location, Green completed, and Red Unfinished.

Note It is important to enter each user's correct weight before the exercise session, because all display calculations are based upon this number.

Incline Display

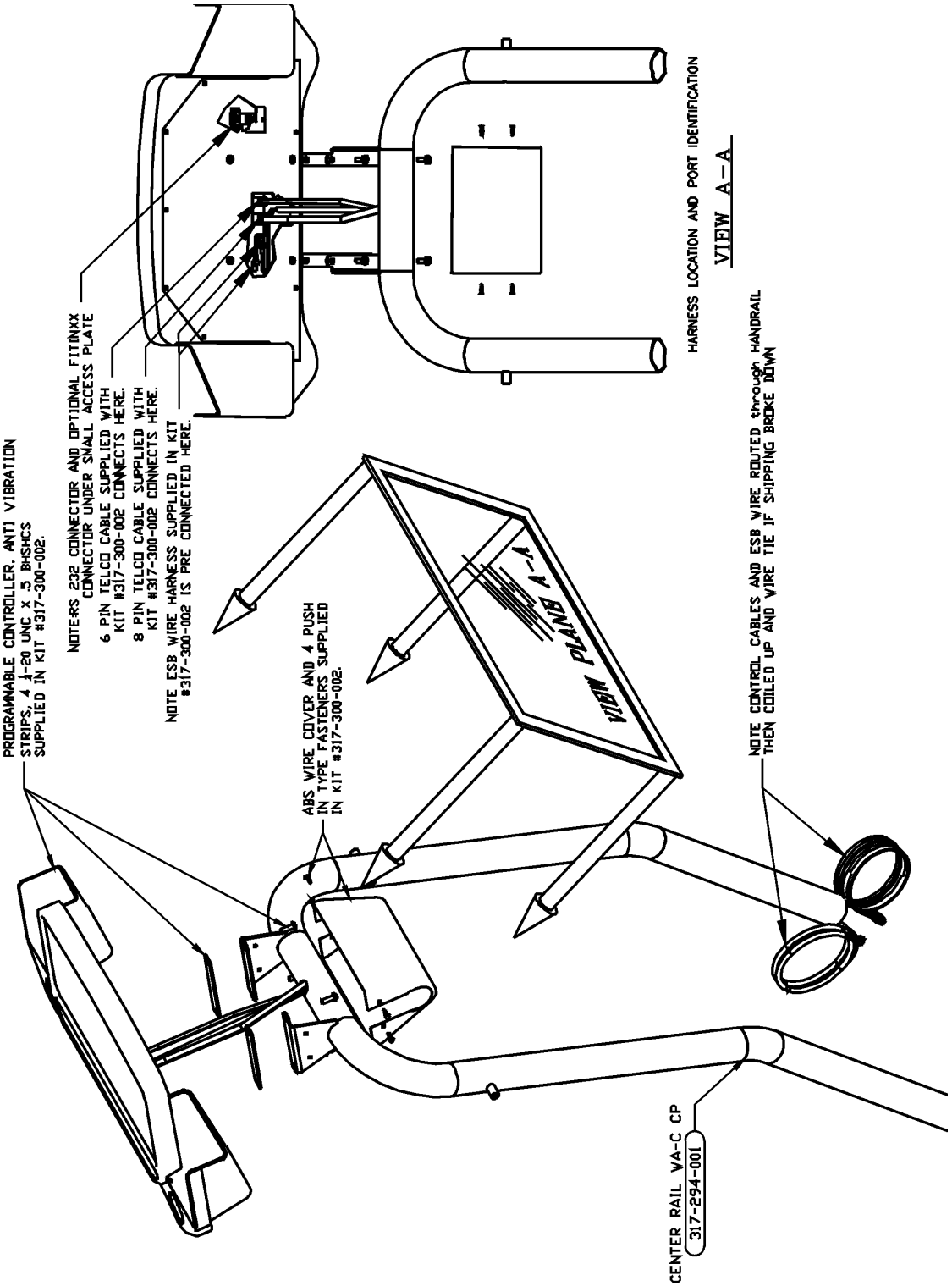
The belt inclination is displayed in the Incline Display window. The minimum elevation is 0% and the maximum is 25%.

Incline +/– Keys

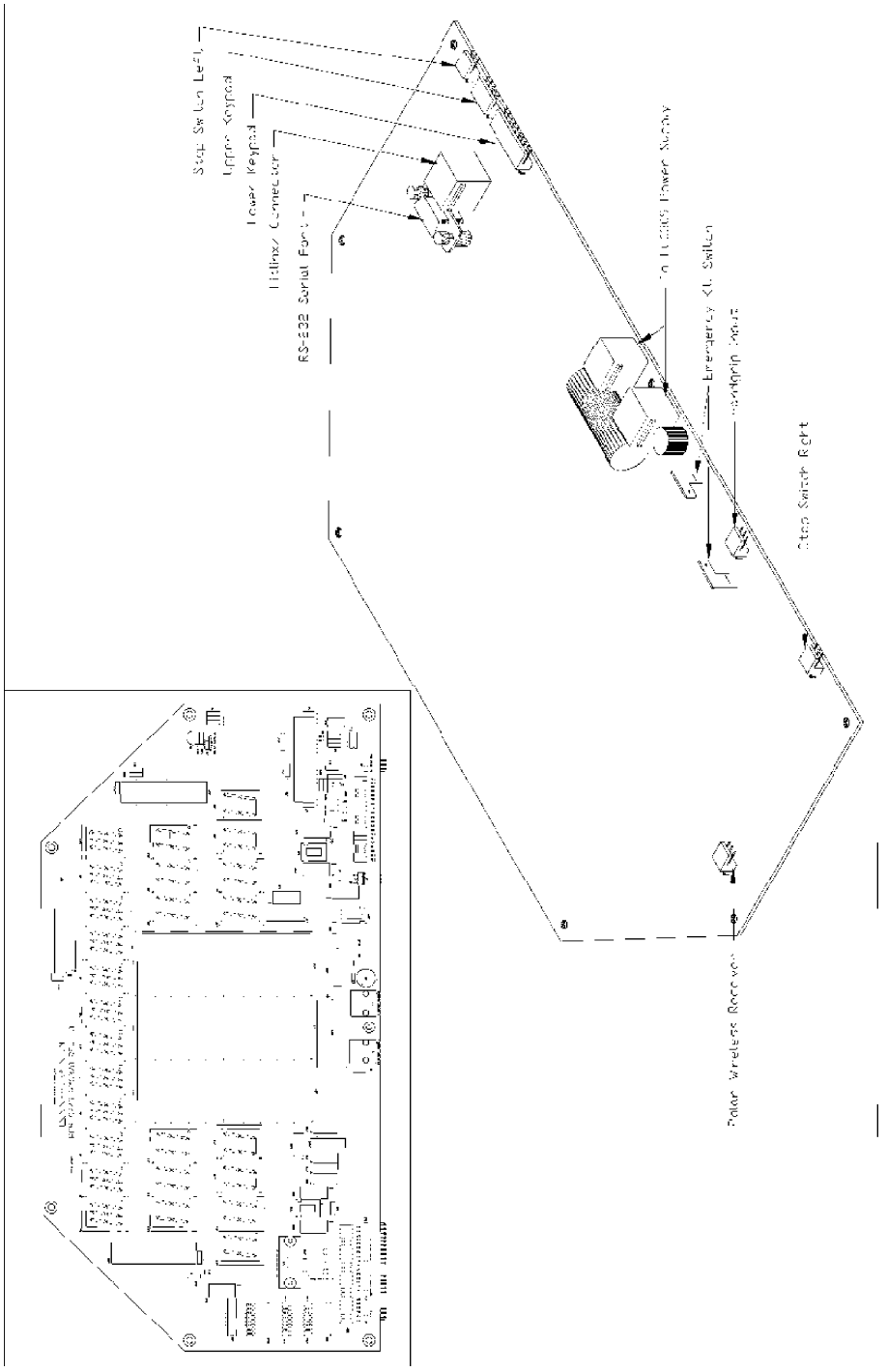
The Incline +/– keys increase or decrease the incline of the running belt in 0.5% increments. Press and hold the + or – key until the desired inclination is displayed. The front of the TRACKMASTER® treadmill will gradually raise or lower until the desired incline is attained.

Setup Check

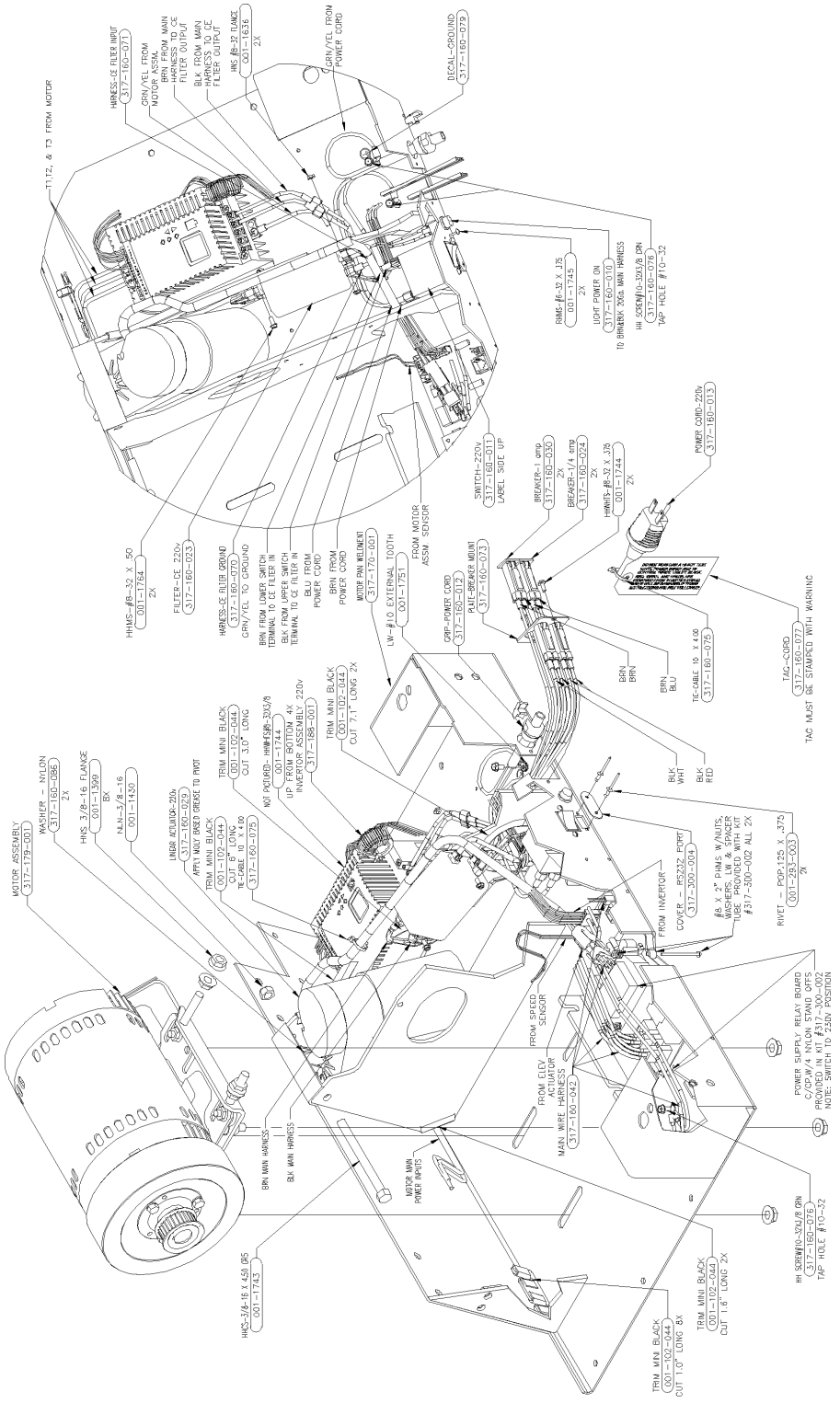
1. Press and hold the Stop key and Enter key until “Choose” is displayed in the Message Center. For MPH operation, press 1; for KPH operation press 2.
2. The Default for “Time Limit” is 90.00 minutes. Press enter if no change is required.
3. “Minimum Speed (MPH)” will display in the Message Center, the default in the speed window is “0.5”. To change, press the number keys until desired speed is indicated and then press Enter. (Treadmill will not operate slower than 0.5 mph.)
4. “Maximum Speed (MPH)” will display in the Message Center, the default in the speed window is “12.0”. To change, press the number keys until desired speed is indicated and then press Enter. (Treadmill will not operate faster than 12 mph.)
5. “Maximum Calibration Grade” will display in the Message Center, the default in the Incline window is “25.0.” Do not adjust this number unless instructed, or if incorrect. To change, press the number keys until desired elevation is displayed in the Incline window.
6. “Select Max Grade Then Press Enter” will display in the Message Center. You cannot increase this number over the limitation of your treadmill Elevation system. For your treadmill, this number should be 25.0. To move to next mode and then press Enter.
7. “Maximum Correction Factor” will display in the Message Center, the default of “4” will appear in the Speed window. If necessary, use the number keypad to change back to “4,” and then press Enter.
8. “Speed Ratio” will display in the Message Center, the default number “3175” will appear in the “Distance” window. If necessary, use the number keypad to change back to “3175,” and then press Enter.
9. “Serial Hrate” or “Polar Hrate” will appear in the Message Center. The setting for this function is determined by what configuration is used with your treadmill. Do not change! (Pressing either the Incline + or – key will change selection.) Press Enter.
10. “HRS **.**” will indicate how many hours the treadmill has been operated. Press Enter.
11. “DIS **.***” will indicate how many miles the treadmill has run. Press Enter.
12. “Press Stop + Enter For SPD CAL” will scroll through the Message Center. To initiate a speed calibration of treadmill, press and hold the Stop key and then the Enter key and continue holding both keys until “Automatic Calibration Clear Belt Then Press Start” to calibrate speed, press the Start key.
13. If calibration is not necessary, then press Enter and control will return to normal operation.


PROGRAMMABLE CONTROLLER, ANTI VIBRATION STRIPS, 4 1/4-20 UNC X .5 B+SHCS SUPPLIED IN KIT #317-300-002.
NOTE:ERS 232 CONNECTOR AND OPTIONAL FITINXX CONNECTOR UNDER SMALL ACCESS PLATE
6 PIN TELCO CABLE SUPPLIED WITH KIT #317-300-002 CONNECTS HERE.
8 PIN TELCO CABLE SUPPLIED WITH KIT #317-300-002 CONNECTS HERE.
NOTE ESB WIRE HARNESS SUPPLIED IN KIT #317-300-002 IS PRE CONNECTED HERE.
HARNESS LOCATION AND PORT IDENTIFICATION
VIEW A-A
ABS WIRE COVER AND 4 PUSH IN TYPE FASTENERS SUPPLIED IN KIT #317-300-002.
VIEW A-A
NOTE CONTROL CABLES AND ESB WIRE ROUTED through HANDRAIL THEN COILED UP AND WIRE TIE IF SHIPPING BROKE DOWN
CENTER RAIL WA-C CP 317-294-001

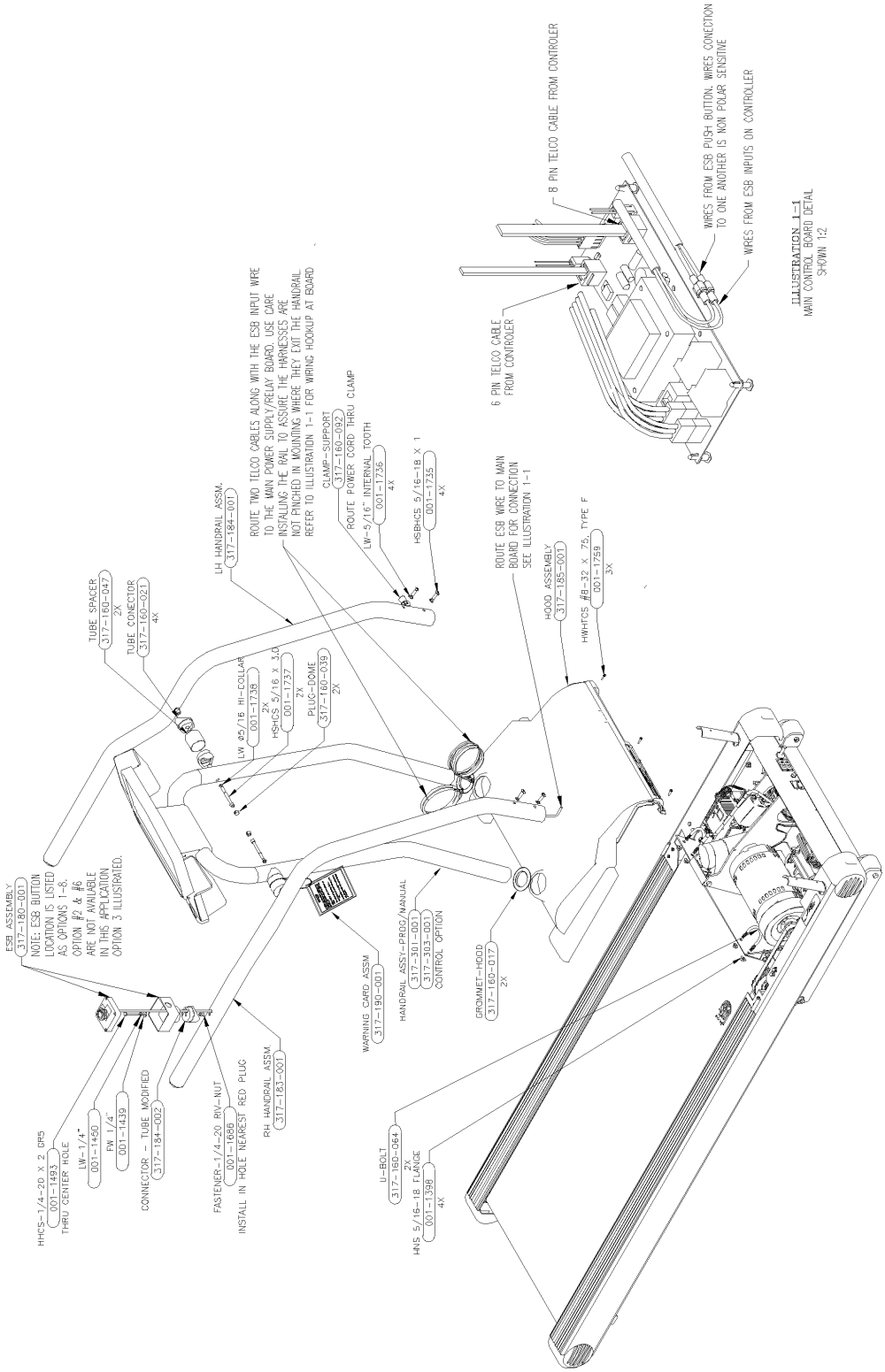
Programmable Control Assembly



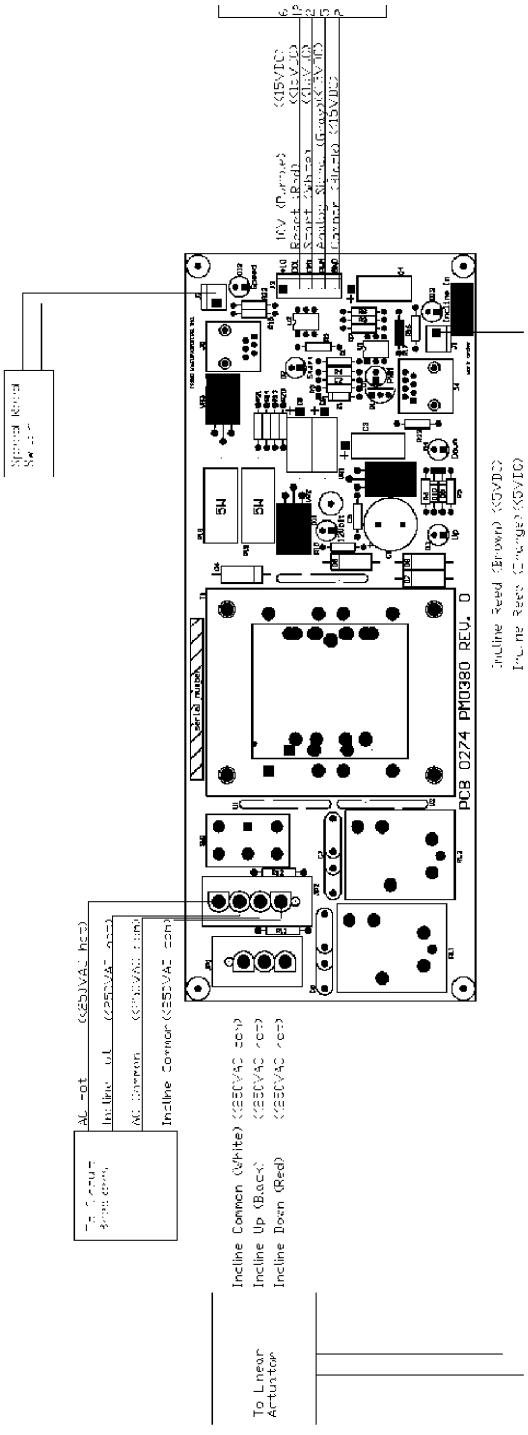
Programmable Control Wiring


T1,T2, & T3 FROM MOTOR
HARNESS-CE FILTER INPUT (317-160-071)
GRN/YEL FROM MOTOR ASSY
BRN FROM MAIN HARNESS TO CE FILTER OUTPUT
BLK FROM MAIN HARNESS TO CE FILTER OUTPUT
HMS #8-32 FLANGE (001-1636) 2X
GRN/YEL FROM POWER CORD
DECAL-GROUND (317-160-079)
HHMS-#8-32 X .50 (001-1764) 2X
FILTER-CE 220v (317-160-023)
HARNESS-CE FILTER GROUND (317-160-070) GRN/YEL TO GROUND
BRN FROM LOWER SWITCH TERMINAL TO CE FILTER IN
BLK FROM UPPER SWITCH TERMINAL TO CE FILTER IN
BLU FROM POWER CORD
BRN FROM POWER CORD
MOTOR PAN WELDMENT (317-170-001)
LW-#10 EXTERNAL TOOTH (001-1751)
FROM MOTOR ASSM SENSOR
RHMS-#8-32 X .375 (001-1745) 2X
LIGHT POWER ON (317-160-010) TO BREAKER 20OL MAIN HARNESS
HH SCREW 10-32X3/8 GRN (317-160-076) TAP HOLE #10-32
SWITCH-220v (317-160-011) LABEL SIDE UP
BREAKER-1 amp (317-160-030) 2X
BREAKER-1/4 amp (317-160-024) 2X
HHMS-#8-32 X .375 (001-1744) 2X
POWER CORD-220v (317-160-013)
GRP-POWER CORD (317-160-012)
PLATE-BREAKER MOUNT (317-160-073)
BRN BRN
BRN BLU
TC-CABLE 10 X 4.00 (317-160-075)
TAC-CORD (317-160-077)
TAC MUST BE STAMPED WITH WARNING
BLK WHT
BLK RED
TRIM MINI BLACK (001-102-044) CUT 7.1" LONG 2X
NUT PICARD-HHMFSJB-32X3/8 (001-1744) UP FROM BOTTOM 4X
INVERTOR ASSEMBLY 220v (317-160-001)
MOTOR ASSEMBLY (317-179-001)
WASHER - NYLON (317-160-066) 2X
HHS 3/8-16 FLANGE (001-1399) BK
HLN-3/8-16 (001-1430)
LINEAR ACTUATOR-220v (317-160-029) APPLY MOLY GREASE TO PIVOT
TRIM MINI BLACK (001-102-044) CUT 6" LONG
TRIM MINI BLACK (001-102-044) CUT 3.0" LONG
TC-CABLE 10 X 4.00 (317-160-075)
COVER - RS232 PORT (317-300-004)
#8 X 2" PHMS W/NUTS, WASHERS, LW & SPACER TUBE PROVIDED WITH KIT #317-300-002 ALL 2X
RIVET - POP-125 X .375 (001-263-033) 2X
FROM INVERTOR
FROM SPEED SENSOR
FROM CLDV ACTUATOR
MAIN WIRE HARNESS (317-160-042)
BRN MAIN HARNESS
BLK MAIN HARNESS
MOTOR MAIN POWER INPUTS
POWER SUPPLY RELAY BOARD C/SPLW/4 NYLON STAND OFFS PROVIDED IN KIT #317-300-002 NOTE: SWITCH TO 230V POSITION
HMS-3/8-16 X 4.50 G5 (001-1743)
TRIM MINI BLACK (001-102-044) CUT 1.0" LONG 6X
TRIM MINI BLACK (001-102-044) CUT 1.6" LONG 2X
HH SCREW 10-32X3/8 GRN (317-160-076) TAP HOLE #10-32

Motor Pan Assembly C and CP



Final Assembly C and CP


PCB 0274 PM0380 REV. D
Incline Common (White) (235VAC com)
Incline Up (Black) (235VAC red)
Incline Down (Red) (235VAC red)
To Linear Actuator

Main Power/Relay Board
C and CP Units Only